## REMARKS

Claims 42 and 43 have been amended. Claims 1, 2, 4-8, 10-14, 16, 17, 20, 22, 24, 25, 35, and 39-43 are pending in the present application.

It is respectfully submitted that the present amendment presents no new issues or new matter and places this case in condition for allowance. Reconsideration of the application in view of the above amendments and the following remarks is requested.

### I. The Rejection of Claims 42 and 43 under 35 U.S.C. § 112, Second Paragraph

Claims 42 and 43 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite because each claim depends upon a canceled claim. Claims 42 and 43 have been amended to depend on claims 41 and 42, respectively.

For the foregoing reason, Applicants submit that the new claims overcome the rejections under 35 U.S.C. § 112. Applicants respectfully request reconsideration and withdrawal of the rejection.

### II. The Rejection of Claims 1, 2, 4-8, 10, 11, 14, 16, 17, 20, 22, 24, 25, 35, and 39-43 under 35 U.S.C. § 103

Claims 1, 2, 4-8, 10, 11, 14, 16, 17, 20, 22, 24, 25, 35, and 39-43 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yamashita (U.S. Patent No. 5,312,631) in view of Fan *et al.* (U.S. Patent No. 4,503,127) based on the reasoning set forth in paragraph Nos. 6, 7, and 9, Paper No. 011604. This rejection is respectfully traversed.

The Examiner has the initial burden of establishing a *prima facie* case of obviousness. A finding of obviousness under § 103 requires a determination of the scope and content of the prior art, the differences between the claimed invention and the prior art, the level of ordinary skill in the art, and whether the differences are such that the claimed subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made. *Graham v. Deere*, 383 US 1 (1966). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion that the combination be made. *In re Stencel*, 828 F2d 751, 4 USPQ2d 1071 (Fed. Cir. 1987).

Yamashita discloses immersing and washing an agricultural product containing starch in an aqueous solution of at least one of alpha-amylase, beta-amylase, glucoamylase, and

other kinds of amylolytic enzymes. However, Yamashita does not disclose treating a potato substance with an effective amount of one or more exogenous enzymes selected from the group consisting of a glucose oxidase, laccase, lipase, pectinase, pentosanase, protease, and transglutaminase, as claimed herein. Glucose oxidase, laccase, lipase, pectinase, pentosanase, protease, and transglutaminase are not amylolytic enzymes.

Fan *et al.* disclose a hot oil pre-treatment method for activating pectin methylesterase endogenous to starch-containing vegetables in order to lower the fat content of the final potato product. However, Fan *et al.* does not disclose treating a potato substance with an effective amount of an exogenous pectinase, as claimed herein.

The Office Action argues that Fan *et al.* supports an exogenous enzyme, viz. pectin methylesterase, will form *in situ*, and thus be present, during the heating of the potatoes. One of ordinary skill in the art would recognize that the pectin methylesterase released from the potatoes during the heating of the potatoes would still be an endogenous enzyme, not an exogenous enzyme. The term "endogenous" is defined by Webster's New World Dictionary, Third College Edition, New York, 1988, as "originating internally", while the term "exogenous" is defined as "originating externally". The pectin methylesterase of Fan *et al.* originates internally from the potatoes and, thus, constitutes an endogenous enzyme. In the instant claims, the pectinase originates externally and, thus, constitutes an exogenous enzyme.

Applicants also submit that Fan *et al.* teach away from treating a potato substance with an effective amount of an exogenous pectinase since there is no teaching or suggestion of using an effective amount of an exogenous pectinase. Example 3 of Applicants' specification shows that pectin methylesterase, when added exogenously to potato pieces, increased the crispiness of the potato pieces after deep frying over the untreated control. The results were unexpected and surprising since the Fan *et al.* reference provided no such teaching or suggestion. It is impermissible to use the claims as a framework from which to pick and choose among individual references to recreate the claimed invention. *In re Fine*, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988).

Yamashita and Fan, alone or in combination, do not teach or suggest methods for producing a consumable product from potatoes, comprising: (a) treating a potato substance with an effective amount of one or more exogenous enzymes selected from the group consisting of a glucose oxidase, laccase, lipase, pectinase, pentosanase, protease, and transglutaminase, and (b) processing the enzyme-treated potato substance to produce a potato product, as claimed herein.

For the foregoing reasons, Applicants submit that the claims overcome this rejection under 35 U.S.C. § 103(a). Applicants respectfully request reconsideration and withdrawal of the rejection.

## III. The Rejection of Claims 12 and 13 under 35 U.S.C. § 103

Claims 12 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yamashita (U.S. Patent No. 5,312,631) in view of Fan *et al.* (U.S. Patent No. 4,503,127), as applied to claims 1, 2, 4-8, 10, 11, 14, 16, 17, 20, 22, 24, 25, 35, and 39-43 above, and further in view of Judkins *et al.* (U.S. Patent No. 6,033,697), Rogols *et al.* (U.S. Patent No. 5,897,898), or Stevens *et al.* (U.S. Patent No. 5,965,189) based on the reasoning set forth in paragraph No. 8, Paper No. 011604.

This rejection is respectfully traversed.

Yamashita, as discussed above in Section II, discloses treating an agricultural product containing starch with at least one amylolytic enzyme. However, Yamashita does not disclose treating an agricultural product containing starch with one or more exogenous enzymes selected from the group consisting of a glucose oxidase, laccase, lipase, pectinase, pentosanase, protease, and transglutaminase. Glucose oxidase, laccase, lipase, pectinase, pentosanase, protease, and transglutaminase are not amylolytic enzymes.

Fan *et al.*, as discussed above in Section II, disclose a hot oil pre-treatment method for activating pectin methylesterase endogenous to starch-containing vegetables in order to lower the fat content of the final potato product. However, Fan *et al.* does not disclose treating a potato substance with an effective amount of an exogenous pectinase, as claimed herein, but rather discloses treating a potato substance with an endogenous pectinase (see Section II).

Judkins *et al.* disclose frozen par-fried potato strips having a dual coating on the strips consisting essentially of a coating of a hydrocolloid layer on the surface of the strips and a separate and distinct starch-based batter coating over and adhered to the hydrocolloid layer.

Rogols *et al.* disclose a process for preparing a frozen potato product coated with an aqueous starch slurry.

Stevens *et al.* disclose a slurry comprised of starch to coat a potato product to extend the hold time thereof.

Yamashita, Fan *et al.*, Judkins *et al.*, Rogols *et al.*, and Stevens *et al.*, alone or in combination, do not teach or suggest methods for producing a consumable product from

potatoes, comprising: (a) treating a potato substance with an effective amount of one or more exogenous enzymes selected from the group consisting of a glucose oxidase, laccase, lipase, pectinase, pentosanase, protease, and transglutaminase, and (b) processing the enzyme-treated potato substance to produce a potato product, and further comprising coating the potato substance with a starch and/or a hydrocolloid, as claimed herein. It was, therefore, improper to combine Yamashita and Fan *et al.* with Judkins *et al.*, Rogols *et al.*, or Stevens *et al.*

For the foregoing reasons, Applicants submit that the claims overcome this rejection under 35 U.S.C. § 103(a). Applicants respectfully request reconsideration and withdrawal of the rejection.

## IV. The Rejection of Claims 1, 2, 4, 5, 10, 11, 14, 16, 17, 20, 22, 24, 25, 35, and 39-43 under 35 U.S.C. § 103

Claims 1, 2, 4, 5, 10, 11, 14, 16, 17, 20, 22, 24, 25, 35, and 39-43 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Roan (U.S. Patent No. 4,058,631, claim 1) in view of Fan *et al.* (U.S. Patent No. 4,503,127) based on the reasoning set forth in paragraph Nos. 10, 11 and 14, Paper No. 011604.

This rejection is respectfully traversed.

Roan discloses the pretreatment of raw, starchy food products with an aqueous solution of alpha-amylase to reduce the absorption of fats and oils during frying. However, Roan does not disclose treating raw, starchy food products with one or more exogenous enzymes selected from the group consisting of a glucose oxidase, laccase, lipase, pectinase, pentosanase, protease, and transglutaminase. Glucose oxidase, laccase, lipase, pectinase, pentosanase, protease, and transglutaminase are not amylolytic enzymes.

Fan *et al.*, as discussed in Section II above, disclose a hot oil pre-treatment method for activating pectin methylesterase endogenous to starch-containing vegetables in order to lower the fat content of the final potato product. However, Fan *et al.* does not disclose treating a potato substance with an effective amount of an exogenous pectinase, as claimed herein, but rather discloses treating a potato substance with an endogenous pectinase (see Section II).

Roan and Fan *et al.*, alone or in combination, do not teach or suggest methods for producing a consumable product from potatoes, comprising: (a) treating a potato substance with an effective amount of one or more exogenous enzymes selected from the group consisting of a glucose oxidase, laccase, lipase, pectinase, pentosanase, protease, and

transglutaminase, and (b) processing the enzyme-treated potato substance to produce a potato product, and further comprising coating the potato substance with a starch and/or a hydrocolloid, as claimed herein. It was, therefore, improper to combine Roan and Fan *et al.*

For the foregoing reasons, Applicants submit that the claims overcome this rejection under 35 U.S.C. § 103(a). Applicants respectfully request reconsideration and withdrawal of the rejection.

## V. The Rejection of Claims 6-8 under 35 U.S.C. § 103

Claims 6-8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Roan (U.S. Patent No. 4,058,631) in view of Fan *et al.* (U.S. Patent No. 4,503,127) as applied to claims 1, 2, 4, 5, 10, 11, 14, 16, 17, 20, 22, 24, 25, 35, and 39-43 above, and further in view of Yamashita based on the reasoning set forth in paragraph No. 12, Paper No. 011604.

This rejection is respectfully traversed.

Roan, as discussed in Section IV above, discloses the pretreatment of raw, starchy food products with an aqueous solution of alpha-amylase to reduce the absorption of fats and oils during frying. However, Roan does not disclose treating raw, starchy food products with one or more exogenous enzymes selected from the group consisting of a glucose oxidase, laccase, lipase, pectinase, pentosanase, protease, and transglutaminase. Glucose oxidase, laccase, lipase, pectinase, pentosanase, protease, and transglutaminase are not amylolytic enzymes.

Fan *et al.*, as discussed in Section II above, disclose a hot oil pre-treatment method for activating pectin methylesterase endogenous to starch-containing vegetables in order to lower the fat content of the final potato product. However, Fan *et al.* does not disclose treating a potato substance with an effective amount of an exogenous pectinase, as claimed herein, but rather discloses treating a potato substance with an endogenous pectinase (see Section II).

Yamashita, as discussed above in Section II, discloses treating an agricultural product containing starch with at least one amylolytic enzyme. However, Yamashita does not disclose treating an agricultural product containing starch with one or more exogenous enzymes selected from the group consisting of a glucose oxidase, laccase, lipase, pectinase, pentosanase, protease, and transglutaminase.

Roan, Fan *et al.*, and Yamashita, alone or in combination, do not teach or suggest methods for producing a consumable product from potatoes, comprising: (a) treating a potato substance with an effective amount of one or more exogenous enzymes selected from

the group consisting of a glucose oxidase, laccase, lipase, pectinase, pentosanase, protease, and transglutaminase, and (b) processing the enzyme-treated potato substance to produce a potato product, as claimed herein. It was, therefore, improper to combine Roan, Fan *et al.*, and Yamashita.

For the foregoing reasons, Applicants submit that the claims overcome this rejection under 35 U.S.C. § 103(a). Applicants respectfully request reconsideration and withdrawal of the rejection.

## VI. The Rejection of Claims 12 and 13 under 35 U.S.C. § 103

Claims 12 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Roan (U.S. Patent No. 4,058,631) in view of Fan *et al.* (U.S. Patent No. 4,503,127), as applied to claims 1, 2, 4-8, 10, 11, 14, 16, 17, 20, 22, 24, 25, 35, and 39-43 above, and further in view of Judkins *et al.* (U.S. Patent No. 6,033,697), Rogols *et al.* (U.S. Patent No. 5,897,898), or Stevens *et al.* (U.S. Patent No. 5,965,189) based on the reasoning set forth in paragraph No. 13, Paper No. 011604.

This rejection is respectfully traversed.

Roan, as discussed in Section IV above, discloses the pretreatment of raw, starchy food products with an aqueous solution of alpha-amylase to reduce the absorption of fats and oils during frying. However, Roan does not disclose treating raw, starchy food products with one or more exogenous enzymes selected from the group consisting of a glucose oxidase, laccase, lipase, pectinase, pentosanase, protease, and transglutaminase. Glucose oxidase, laccase, lipase, pectinase, pentosanase, protease, and transglutaminase are not amylolytic enzymes.

Fan *et al.*, as discussed above in Section II, disclose a hot oil pre-treatment method for activating pectin methylesterase endogenous to starch-containing vegetables in order to lower the fat content of the final potato product. However, Fan *et al.* does not disclose treating a potato substance with an effective amount of an exogenous pectinase, as claimed herein, but rather discloses treating a potato substance with an endogenous pectinase (see Section II).

Judkins *et al.* disclose frozen par-fried potato strips having a dual coating on the strips consisting essentially of a coating of a hydrocolloid layer on the surface of the strips and a separate and distinct starch-based batter coating over and adhered to the hydrocolloid layer.

Rogols *et al.* disclose a process for preparing a frozen potato product coated with an

aqueous starch slurry.

Stevens *et al.* disclose a slurry comprised of starch to coat a potato product to extend the hold time thereof.

Roan, Fan *et al.*, Judkins *et al.*, Rogols *et al.*, and Stevens *et al.*, alone or in combination, do not teach or suggest methods for producing a consumable product from potatoes, comprising: (a) treating a potato substance with an effective amount of one or more exogenous enzymes selected from the group consisting of a glucose oxidase, laccase, lipase, pectinase, pentosanase, protease, and transglutaminase, and (b) processing the enzyme-treated potato substance to produce a potato product, and further comprising coating the potato substance with a starch and/or a hydrocolloid, as claimed herein. It was, therefore, improper to combine Fan *et al.* with Judkins *et al.*, Rogols *et al.*, and/or Stevens *et al.*

For the foregoing reasons, Applicants submit that the claims overcome this rejection under 35 U.S.C. § 103(a). Applicants respectfully request reconsideration and withdrawal of the rejection.

## VII. Conclusion

In view of the above, it is respectfully submitted that all claims are in condition for allowance. Early action to that end is respectfully requested. The Examiner is hereby invited to contact the undersigned by telephone if there are any questions concerning this amendment or application.

Respectfully submitted,

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